Arizona Volunteer Monitoring Program

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Biographical Sketches of Authors

Mario Castaneda is a faculty in the Water Resources Technology Program at GateWay Community College. He has also coordinated the Volunteer Monitoring Program for the Arizona Department of Environmental Quality. He has worked on binational surface water and groundwater water quality monitoring studies leading to the exchange of water quality data between Mexico and the U.S. and was responsible for developing a bilingual water quality field sampling manual for the agency. He holds a B.S. in Chemical Engineering from University of Sonora, a M.S. in Petroleum Engineering from Stanford University, and pursued graduate studies in Chemical and Petroleum Engineering at the University of Kansas.

Lisa Young is the Program Director for the Water Resources Technology and Occupational Safety and Health Technology Programs at GateWay Community College. Ms. Young earned a B.S. in Geography, a M.Ed. in Learning and Instructional Technology and is currently working on her Ph.D. in Geography at Arizona State University. She teaches courses in hydrology, treatment technologies, geographic information systems (GIS) and industrial safety.

Linda Taunt is manager of the Hydrologic Support & Assessment Section at the Arizona Department of Environmental Quality. Her group is responsible for all the ambient surface and ground water sampling throughout the state, establishing water quality standards, conducting TMDLs and assisting in the remediation of impaired water bodies. She attended Arizona State University and has a B.S. degree in Geography and Regional Planning and an M.S.E. in Civil Engineering.

Abstract

Across the nation, volunteer groups monitor the condition of streams, rivers, lakes, reservoirs, estuaries, coastal waters, wetlands and wells. Volunteers can make visual observations of habitat, land uses, and the impact of storms, measure the physical and chemical characteristics of waters and assess the abundance and diversity of living creatures; aquatic insects, plants, fish, birds, and other wildlife. The number, variety, and complexity of these projects are continuously on the rise.

In Arizona, a large, geographically diverse arid state, the Arizona Department of Environmental Quality (ADEQ) is developing a Volunteer Monitoring Program to support these volunteer efforts. Volunteer groups across the state will collect data to supplement the water quality information collected by ADEQ. The volunteer data can be used by ADEQ to: screen water for potential problems, conduct further research or implement restoration efforts, establish baseline conditions or trends for water that might otherwise go unmonitored, and help evaluate the success of Best Management Practices designed to mitigate problems. Helping volunteer groups to collect credible and scientifically defensible water quality data is important since ADEQ, like many other organizations, is having to do more with less resources in both personnel and funding. ADEQ has teamed up with GateWay Community College in Phoenix to offer a course on water quality sampling for volunteer groups that will interact with the agency's new volunteer monitoring program. The one-credit course offered through GateWay's Water Resources Technology Program is designed to teach volunteers how to use water quality monitoring equipment, develop sampling plans, address data quality objectives, collect samples, and compile data. In addition, GateWay is housing and maintaining the field equipment provided by ADEQ and used by the volunteers during the groups' water quality monitoring activities.

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